DOCUMENT RESUME

ED 366 259 HE 027 101

AUTHOR Carson, Joan G.; And Others
TITLE Literacy Analyses of High School and University Courses: Summary Descriptions of Selected Courses.
INSTITUTION Georgia State Univ., Atlanta. Center for the Study of Adult Literacy.
SPONS AGENCY Fund for the Improvement of Postsecondary Education (ED), Washington, DC.
PUB DATE May 92
NOTE 22p.; For related papers, see HE 027 102-103.
PUB TYPE Reports - Evaluative/Feasibility (142) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Biology; Cognitive Development; *College Curriculum; Comparative Analysis; Course Content; *Curriculum Research; English; Higher Education; High Schools; History; Political Science; *Reading; *Secondary School Curriculum; Study Skills; Tests; Thinking Skills; *Writing (Composition)

ABSTRACT

This study compared reading and writing demands at a city high school and an urban university across the following disciplines: biology, English, history, and political science. Analysis revealed five generalizations concerning high school disciplines: (1) in-class activities and student requirements for courses are tied to the course text which defines the content to be learned; (2) classes tend to be highly participatory, with a great deal of student/instructor exchange and student interaction with course text; (3) high school courses show a high level of integration of language and study skills with course content; (4) cognitive demands of high school courses tend to be knowledge, comprehension, and application (as opposed to the higher demands of analysis, synthesis, and evaluation); and (5) teachers are accountable for student performance on a number of standardized exams causing these exams to determine much of what teachers do in content classes. Analysis of university reading and writing demands across disciplines revealed that these demands vary, but except for composition, little writing is required, and when it is, its focus is on content and not on form. Cognitive demands of college courses are embedded in the reading and writing requirements. Finally, exams are the focus of a course for many students because exams are the way in which students discern the reading and writing requirements of a course. (GLR)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 366 259

LITERACY ANALYSES OF HIGH SCHOOL AND UNIVERSITY COURSES: SUMMARY DESCRIPTIONS OF SELECTED COURSES

Developed as a part of a grant from the Fund for the Improvement of Postsecondary Education (FIPSE), U. S. Department of Education and in affiliation with the Center for the Study of Adult Literacy, Georgia State University, Atlanta, Georgia 30303

May 1992

PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Joanne R. Nurss

Georgia State Univ

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC).

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Joan G. Carson, Ph.D.
Applied Linguistics and ESL

Nancy D. Chase, Ph.D.
Division of Developmental Studies

Sandra U. Gibson, Ph.D.
Assistant Director, Counseling Center

IAE 022 101

BEST COPY AVAILABLE

SUMMARY
CITY HIGH SCHOOL

An analysis of reading and writing demands across disciplines in high school reveals several generalizations:

1. In-class activities and student requirements for courses are very much based on, and tied to, the course text. That is, it is primarily the text that defines the content to be learned in the course.

2. Classes tend to be highly participatory, with a great deal of student/instructor exchange and student interaction with course text.

3. High school courses show a high level of integration of language and study skills with course content.

4. On Bloom's taxonomy, cognitive demands of high school courses tend to be the first three:

   --knowledge
   --comprehension
   --application.

   Students are also asked to engage in some analysis. (The three highest levels of Bloom's six-level taxonomy are: analysis, synthesis, and evaluation.)

5. City High teachers are accountable for student performance on a number of standardized exams:

   A. City-wide standardized final exams in content courses (keyed to Quality Core Curriculum Objectives.)

   B. The Test of Academic Proficiency (TAP), taken in each of the first three years of high school. (9th grade TAP scores also determine whether students will get credit for a course. They must score above the 25th national percentile.)

   C. The Basic Skills Test, a test of reading, writing, and math skills that students must pass to graduate. This exam will be replaced--for this year's 8th graders--by the Junior Year Matrix Exam, which will be a fact-based exam that students must pass to graduate.

   These exams determine much of what teachers do in content classes.

SUMMARY
URBAN UNIVERSITY

An analysis of reading and writing demands across disciplines in the university reveals several generalizations:

1. Reading and writing demands vary across disciplines.

   A. All courses (except composition) are based on reading.

   B. All courses (except composition) require little writing.

   C. When courses do require writing, the focus is on content and not on form (except composition).

2. Cognitive demands of the course are embedded in the reading and writing requirements.

   A. Cognitive demands can be a function of the cognitive density of the text (biology).

   B. Cognitive demands can be a function of memory load (history).

   C. Cognitive demands can be a function of cognitive flexibility (political science).

   D. Cognitive demands can be a function of time and creativity (composition).

3. Exams are the focus of a course for many students because exams are the way in which students discern the reading and writing requirements of a course.

   A. Exams provide a guide for developing a hierarchy of importance of course content.

   B. Exams provide a guide for distinguishing the importance of various course tasks and assignments (e.g., notetaking, text reading).

   C. Exams provide the students with instructor feedback by which students can adjust their study and test-taking strategies.

I. BIOLOGY

A. CITY HIGH BIOLOGY

This course follows a curriculum standardized within the City Public Schools. In addition to a standardized curriculum, mid-semester and final examinations are standardized. Most students enrolled in the class were in 10th grade. The class met during the first period (9:00-10:45 a.m.) alternate weeks on Monday-Wednesday-Friday and on Tuesday-Thursday. Students were thus in class for almost 2 hours and had about 5 hours of instruction one week and about 3 1/2 hours of instruction the next week.

Analysis of student surveys, class artifacts (syllabus, textbook, and written materials), and interviews with teacher and students led to the following conclusions:

1. Students did not use reading as their primary means of learning.

Although on the survey every student said it was necessary to read to pass the course, only 18% said that they read everything assigned. The readability analysis showed that the textbook was at 8th grade level and the reference textbook which remained in the classroom was at 7th grade level. Thus although the textbooks were written at what would seem to be an appropriate reading level, in interview students said they didn't like reading and needed to study more. One young woman said, "I never took my books home; I only took my books to class. . . [the teacher] always tells us we should read ahead of time and I never read. . . I feel that the notes that she gives us are more helpful than reading the book." The teacher confirmed these statements in her interview: She said, "I find basically they don't want to read; usually they are motivated to read if they are given a purpose to read or if they are reading about something that interests them. But again it just depends on [whether it is] something that they can relate to. If it is something that they cannot relate to, they have no interest and no desire." When one student was asked whether the course was what she expected it to be, she responded, "we don't have much reading and I expected a little more even though I don't read much."

2. The High School biology course involved a significant amount of writing.

Only about 10-25% of class time was spent in lecture; the majority of class time was devoted to written assignments. For example, prior to viewing a videotape on the anatomy of the frog, students took two pre-tests, one on the internal anatomy, one on the external anatomy of frogs. Following the video, they took comparable post-tests. Other assignments involved an integration of reading and writing: they wrote answers to questions regarding the anatomy of the earthworm, they completed worksheets on mollusks, and they worked on other reading/writing assignments such as identifying main ideas of the chapter. Observation of classes revealed that about 60% of class time was devoted to students' working on the day's written assignment. In three of the 10 classes that were observed, students watched films or videos, and in two classes they performed dissections or did other lab work. Moreover, when students spoke of homework, what they usually seemed to have had in mind was some type of written assignment. When one student was asked how much time she

spent studying/doing homework for this class, she responded "I don't study but my homework is always done."

The other writing in high school biology is notetaking. These biology students primarily relied on listening to the teacher and taking notes in class as the way to learn the material. In interviews students said that their preferred mode of studying was to study their notes. One student said, "She gives us everything we need especially as far as tests [are concerned]. . . . It seems like everything on the test was in my notes because I take very good notes." When asked if they took notes, 88% said yes, and when they were asked to rate the difficulty of various reading and writing tasks, most said they found notetaking to be easy. However, in-class observation showed that students' notetaking was limited to cued notetaking. When cued, about half the class took notes; uncued, essentially none took notes. Statewide procedures specify that each day teachers must write the objectives of the day's class on the chalkboard. These objectives are an example of cued note-taking and illustrate one type of information students were likely to write down in their notes.

3. The primary problem students described in interview related to studying.

Although on the survey "difficulty of tests" was ranked higher than other problems (1.81 on a 4-point scale), when asked to list other problems, students named such difficulties as comprehending when reading and concentrating. These problems were reiterated in the interviews. When asked what had been her greatest weakness in the course, one student replied, "Studying. I just don't do that too well. I never took my books home." Another student said she also had problems studying: "When I am alone I will take out my books and try but I just lose interest." Since the survey had not given "studying" as a possible problem, it was not rated on the 4-point scale. But from the additional problems listed on the survey as well as from the interviews it emerged as the single most frequent problem the high school students experienced.

B. URBAN UNIVERSITY BIOLOGY

Principles of Biology (part 1) at Urban University is the first course in a two-course sequence that is one option for meeting the lower division requirement for 10 hours of laboratory science. Winter Quarter, 1991 there were 245 students enrolled.

1. The primary literacy demand of Principles of Biology related to reading.

In the two sections observed students needed to cover about 30 pages of textbook material, 10 pages of study guide, and 5 pages of lab manual per week. Although the text is well constructed and readable with a readability level of 11th grade, the text is cognitively complex. A significant portion of the text covered in this first course of the sequence focuses on the chemical basis of life and the cell and thus is highly technical. A count of the number of terms included in the assigned chapters of the textbook plus the lab manual was 1053 terms. Thus, although the number of pages assigned is lower than other university courses we included in the study, and although the readability of the textbook is high school level, the conceptual demands of the text, given the technical nature of the content, are challenging.

The nature of the course requiring extensive reading is confirmed in the student surveys, where about 80% said that they found it necessary to read the text to pass the course. Nearly half the students in the courses said they read everything assigned with another nearly 40% saying they read most of the text. Only about 10% admitted that they did not read the assignments. In interview, one student voiced the opinion "everybody in this class expects to do reading." However, a struggling student said, "I just didn't do a lot of the reading. I mean once I got into the reading I realized it would not have been that difficult at all had I taken the time. My problem is time; I personally didn't give myself enough time."

When students were asked their opinion about the amount of reading, the vast majority of students (87%) found the amount of reading assigned to be appropriate. When students found the reading difficult, the single most frequently given reason (by 40% of the students) was that the ideas were hard; only 20% said it was too much material.

2. The primary writing task was notetaking.

About 90% of class time in the lecture portion of the course is spent, not unexpectedly, on lecture. Notetaking turned out to be the primary writing task of the course. Class observations revealed that cued about 85% of students in a typical lecture class took notes; uncued, about half still took notes. Notetaking is also perceived as the most difficult writing task. In a typical lecture class about half of the students said it was moderately difficult or difficult to take notes.

A secondary writing task was writing lab reports. These eight lab reports, however, did not require extensive writing since they consisted of about 10 questions, approximately half of which required only short answer responses. Although in the pre-survey almost 40% of the students indicated that they expected other types of writing assignments, on the post-survey only 5% reported having done any writing except lab reports and notetaking. These few used writing as a study strategy such as taking notes from the textbook, writing in the study guide, or making study cards.

3. The greatest problem students reported related to examinations.

When students were asked what turned out to be their greatest problems in the course, however, neither reading or notetaking ranked very high in comparison to other factors. On the pre-survey "exam difficulty" had been expected to be the greatest problem (rated 2.27 on a 4-point scale), and on the post-survey it was still the greatest problem but was rated more difficult than on the pre-survey (2.56). When students were asked what difficulties they had with examinations, the most frequently mentioned reasons were that they had learned the answer but couldn't remember it or they simply didn't know the answer. To a somewhat lesser extent they didn't understand what the questions were asking for. Test anxiety and having adequate time were not viewed as sources of problems for most people.

Interviews with selected students confirmed that from the students' perspective exams were the biggest problem many of them had had, primarily because their expectations about the exams turned out to be inaccurate. One successful student indicated that for the lab mid-term, she had "thought it would be more of what the lab manual said like definitions. . . instead of things we were supposed to have seen through the microscope." Another student found the exam to be more specific than he had expected it to be. Other students said they had been unsure about where the information on the exam had come from, and others found the format of the tests difficult. Thus for the college students difficulty of exams was the single greatest problem they experienced.

C. BIOLOGY AT CITY HIGH AND URBAN UNIVERSITY: A COMPARISON

Similarities

1. Perhaps because of the standardized curriculum, the content of the high school course was very similar to the two-course college biology sequence with emphasis placed on the cell, genetics, and classification of organisms. Another similarity was the emphasis on learning the vocabulary of biology. As one biology teacher said, "We have a lot of technical terms and they are expected to be able to learn these terms but we try to do it from a perspective in terms of breaking it down to root words, prefixes, suffixes."

Differences

1. One major difference between high school and university biology was the use of writing as a means of learning. In the high school both in-class and homework assignments involved reading and writing in combination. In contrast at the university the only writing other than notetaking and brief lab reports was self-generated writing used as a study strategy by a small minority (about 5%) of the college students. Uncued notetaking, however, was much higher at the university than at the high school.

2. Another major difference in biology at City High School and Urban University was the extent to which students must rely on reading as a source of information. Whereas high school students preferred not to read, most university students found that reading the textbook is essential for success in biology.

3. Finally, whereas most high school students reported their greatest problem is forcing themselves to study, at the university students report their greatest difficulty in knowing what to expect on examinations. High school students found they could depend on their teacher to inform them about what they needed to know to be successful on exams. Thus, whereas when rating problems on a 4-point scale high school students rated "exam difficulty" as 1.81, college students rated it as 2.56, an indication that at the college level students perceived the exams as much more difficult than did the high school students.

II. ENGLISH

A. CITY HIGH SCHOOL ENGLISH

This is a British and world literature course extending through two semesters, one full academic year. Students enrolled in this course were in the 12th grade. Typically, this course follows a curriculum standardized across the public school system, but in the case of this observed course, modifications had been made because of the diversity of students assigned to the class. The instructor, therefore, referred to this course as "non-standardized".

1. **Reading assignments were many and varied, including short stories, poems, and plays.**

   This course was described on the syllabus as a literature and writing course. Texts for the course included a literature textbook, a grammar handbook, and a vocabulary handbook. Assignments relating to these texts included extensive reading of poems and short stories, completing short answer handouts about these readings, and giving oral reports to the class (often prepared in small, in-class groups). Students were asked to to read or refer to the text during six of nine class visits. Lectures and discussion focused on the texts, and students were, at times, asked (or volunteered) to read parts of the text aloud. Students read Camus, Tolstoy, Pope, Milton, and other authors during the ten week period observed. Less than 20% of class time was devoted to instructor lecture with the remaining time spent in discussion and small group activities. Directing students to text and explaining vocabulary was an important part of class instruction. Exams in this class were multiple choice and short answer essays based on the reading assignments. Students were asked to identify lines of poetry, interpret symbolism and character action in a multiple choice format, and in short essays explain similarities and differences of theme, characters' points of view, and give explanation to titles.

2. **Writing related directly to reading. Writing was a means to present information about literature.**

   Students were expected to complete in-class, short answer worksheets and were directed and provided a format for taking notes on in-class student presentations. In the classes observed over 60% of the notetaking was cued by instructor direction. Students in this course were also expected to write a library research paper. Instruction in writing focused on the stages of the writing process including pre-writing and brainstorming, drafting, and revising. Class time was used in library research as well. A section of all quizzes and exams in the course was short answer essay.

3. **Vocabulary and developing ideas to write about were cited as problems. Reading and studying were also problematic to students.**

   Over 60% of students reported that this course required learning "a lot" of new vocabulary. Greatest difficulties in the class were reported as writing research papers,

developing ideas to write about, evaluating their own writing, and taking exams and quizzes. Interviews with students and the instructor cite reading and studying as students' greatest problem in the course. Students interviewed expressed confidence about their ability to be well-organized in their writing which may be attributable to the structured nature and content (worksheets and short written essays about reading assignments) of writing assignments.

B. URBAN UNIVERSITY ENGLISH

Urban University English is an English composition course required of all undergraduates. It is a five hour, ten week course on writing the argumentative essay, and prepares students to pass a departmental exit exam which requires them to write an essay within specified time constraints.

1. **Reading assignments were minimal and only sometimes served as a source of ideas for writing. Texts more often served as a reference to clarify writing skills, illustrate points instructor made about writing structure, voice, and style.**

   This course used three texts: a writing text, a reader, and a grammar/mechanics handbook. Writing activities were the primary focus of this course, and texts, therefore, were used as resources. Assignments were made in the writing text which covered the content of the focus of instruction, and thus served as a reference manual, a source of illustration for points the instructor made about writing, and provided basic information about writing ranging from structure to mechanics. Many of the definitions instructors offered students were terms and concepts explained in the writing text, i.e., the language of English composition : "some inductive traps," "parallel construction," "correcting wordy sentences." Assignments from the rhetorical reader (essays such as "I Want A Wife" and "A Modest Proposal") were used as illustrations of writing structure, voice, style, and to a minimal extent as a source of ideas and information to write about. Reading assignments, overall, were minimal. In addition, students were asked to read handouts of excerpts (sentences and paragraphs) of student writing in order to detect and discuss errors.

2. **Students were required to write in-class and out-of-class argumentative essays, and expected to pass a written exit exam essay.**

   The primary focus of this course was to teach students to write argumentative essays. Approximately 60% of class time was devoted to instructor lecture which explained the mechanics and skills of writing, (e.g., creating a thesis, developing an idea, reviewing common errors in essays), presented writing topics and suggestions for formatting papers, and, at times, referred to assignments in one of the class texts. Rarely were texts read and used in relation to writing topics. Approximately 40% of class time was devoted to in-class writing or small group discussions about student writing. Students were frequently presented several possible writing topics on one day, asked to "think about" given topics out of class, and then on the following class day were given one of those topics to write an essay about in 50 minutes. This procedure resembled the exit exam procedure, and therefore, was geared to prepare students for timed, in-class essay writing. Writing topics in this exercise, and in the

exit exam, were formatted as an analytical or reflective paragraph followed by four assertions. Students were directed to select one of these assertions as the topic of their essay. Samples of student writing from this course indicated that their essays approximated five-paragraph essay organization and revealed an effort on the students' part to display a relationship between major points and supporting examples encompassed by an introduction and conclusion.

3. **Developing ideas to write about and organizing a writing process were reported as students' greatest problems.**

   At the end of the course students ranked their four greatest problems in the course to be in-class writing, evaluating their own writing, developing their ideas for writing, and writing about what they had read. The reasons given for these difficulties were that they felt frustrated in thinking of ideas to write about or in developing adequate support in the form of examples in their writing. These difficulties revealed a shift of concerns from those reported at the beginning of the quarter. Initially students were most worried about strict grading in the course, making oral presentations, and passing the exit exam. By the end of the course less than 40% considered the exit exam a major difficulty, and their anticipated problems in terms of taking the exit exam were concerns about organizing their essays and not making too many errors which had been the emphasis of the instruction they had received. At the beginning of the course over 50% reported that they had no concern about understanding reading assignments. By the end of the quarter only 33% consider reading assignments "easy" and close to 50% reported having difficulty writing about what they had read. This, in part, may be attributable to the fact that almost 50% of students reported that they completed only some, a little, or none of the assigned reading, and over 50% considered reading assignments confusing or only at times helpful for improving their writing. Students reported that what they found difficult in their reading was that the ideas were hard to understand and were not interesting. When asked at the end of the quarter to list the most important things they learned in this course a total of 100 items were listed. Of these items, 66 dealt with form and mechanics, 20 dealt with thought process, 6 were affective comments, and 8 items related to learning to write under time pressure.

C. ENGLISH AT CITY HIGH AND URBAN UNIVERSITY: A COMPARISON

1. High school English has the dual focus of being both a literature and writing course whereas university English focuses on writing instruction. High school English integrates reading and writing activities and places greater emphasis on writing <u>about</u> what is read. Writing assignments in university English were not directly related to reading. One university student commented, "I never had to write an essay [in high school] as in my opinion on something." Writing in high school was described as "answering questions" and writing in university English was described as writing from one's own ideas and not from sources.

2. University English requires students to write an organized essay without consulting sources and within given time constraints. High school English requires no comparable writing activity.

3. Instructor lecture is more dominant in university English than in high school English, and the focus in high school English is on literary content rather than on writing skills and organization. Students in high school English are assigned more reading than in university English, and discussion and class activities are more varied in the high school setting and bound to the content of the text.

4. Class size (20-30 students) and the practice of small group discussion was similar in both settings.

In conclusion, there are very few similarities between high school and university English. By design these courses are extremely different in content, method and purpose.

III. HISTORY

A. CITY HIGH HISTORY

This course is a two-semester course in American History, taken by 11th graders and totalling approximately 180 class hours. The syllabus is a standardized one for the entire City system, and is based on a list of Quality Core Curriculum Objectives (QCCO). These QCCO's include items such as:

"Trace the development of the Industrial Revolution in the U.S."
"Analyze the role of reform movements as a political force in American politics."

Thus, QCCO's include not only factual information, but also different cognitive skills (analyze, evaluate, describe).

Analysis of observations, class artifacts (syllabus, textbook, and written materials), and interviews with teacher and students led to the following conclusions:

1. **The reading requirements of the course are varied and extensive and constitute the primary literacy demand.**

   The text, which was at a 10th grade level on the Flesch readability scale, was 1060 pages (an average of 23 pages per week). In addition to the assigned text, students were also asked:

   --to read a book for a book report;
   --to complete outside reading for a Social Science Fair project;
   --to complete outside reading for a Black history report;
   --to do additional reading for a geography report;
   --to read handouts that contained additional supplementary material.

   Thirty-five percent (35%) of class time was spent on lectures, the primary purpose of which is to explicate text content. The instructor incorporated into the course a variety of activities designed to clarify and reinforce course content. Lecture format was predominately student/teacher exchange, which is designed to require students to interact with text material.

   However, in spite of the fact that reading is the predominant literacy requirement, it remains problematic for students who often felt burdened with the amount of material to be learned. In fact, having enough time for assignments was rated by students as their second greatest problem in the course. About 90% of the students said that they had to read less than 40 pages per week (the text average was 23), and about 90% of the students said that you needed to read to pass the course. BUT, less than half of the students read all or most of the text, and 20% said they didn't read at all. Students felt that reading was difficult. In fact, students ranked reading assignments as being more difficult than writing assignments.

The instructor confirms that reading is a problem. "Reading, not so much as being able to read, but reading all the information that they need to [causes student difficulties]. Sometimes they don't read, and then you have to go back. And I keep telling them even if you read, you need to go back and re-read it, because the first time it might not click and the second time. You need to go back. My higher classes are good readers, but they will get lazy about reading, and this is why you have to do a lot of things in order to get them to read the chapter."

2. **The students are asked to do a significant amount of writing, all of which is based on reading.**

In addition to various study skills throughout the year, writing assignments included a book review, as well as three reports that required library research:

--the Social Science Fair project;
--the Black history report;
--the geography report.

Notetaking, while perceived as important by the instructor, was not a significant activity in the class. Approximately 20% of the students engaged in cued notetaking; only 5% did uncued notetaking. This may be related to the fact that the lectures reinforce text content and so students may perceive that they do not need to take notes since the material presented is available to students in the text.

3. **The students indicated that their major problem in the course was exam difficulty.**

Exams were given at the end of a chapter, at the end of a unit (2-4 chapters), at midterm, and at the end of the course. The final exam was a city-wide standardized exam, keyed to the QCCO's. The exams were primarily objective (matching, multiple choice, brief essay or ID), with a focus on factual information. The exams stressed the cognitive skills of knowledge, comprehension and application (the first three on Bloom's taxonomy).

When student had trouble with exams, half said the difficulty was that they simply didn't know the answer. As one student put it, "Sometimes I studied the wrong things. It is like the things that I expect to be on the test [aren't]... [The instructor] tries to teach us to get the major points and even though I do, sometimes I pick up the wrong facts. I don't pick up the important facts."

In addition to those who didn't know the answer, about one-third of the students said they had learned the answer but had forgotten it. These exam difficulties (not knowing the answer and forgetting the answer) may be related to the amount of material to be learned. About half of the students said that when reading was difficult, it was because there was too much material to remember easily. According to one student, "Even though I understand the material, sometimes I can't memorize it, because it is just so much--so many dates and names, and sometimes I just can't memorize those names at one time."

B. URBAN UNIVERSITY HISTORY

This course is a five-hour course in American history from 1492 to the present, totalling approximately 50 class hours. It is one of three history courses that fulfill a two-course College of Arts and Sciences history requirement. Many undergraduates take this course because, taken along with an introductory political science course, it allows students to be exempted from a required test on the history and constitution of the U.S. and of Georgia.

1. **What is notable about the reading requirements for the course is that there was a significant amount of material to read and learn in a relatively short time.**

   For the two classes observed, the texts were more or less comparable. One text was measured at an 11th grade readability level and consisted of 611 pages (averaging 76 pages per week). The other text was measured at a 13th grade readability level and was 890 pages long (averaging 89 pages per week).

   For the students the amount of reading was both unexpected and intimidating. About 2/3 of the students surveyed expected <u>less than</u> 60 pages per week, but more than 2/3 found that they had to read <u>more than</u> 60 pages per week. Over half the students said that the amount of reading was too much, and although 75% thought that students needed to read to pass the course, in fact, only 40% of the them did all the reading.

   In addition to the fact that the students were assigned a great deal of reading, they could not depend on the professor to explicate text material in lectures. The professors in their lectures tended to lead students <u>away from</u> the text, assuming that the basic material had been understood and using the material to discuss more abstract and cognitively complex issues. Between 30-50% of lecture material was supplemental to the text (and thus unavailable from text readings). These supplemental material included:

   --different perspectives on text topics;
   --additional material not in the text (e.g., geography);
   --amplification of material in text (descriptive anecdotes, current events).

2. **The primary writing requirement was notetaking, which was not particularly challenging to students. Essay exams, however, provided students with a set of cognitively complex tasks.**

   The fact that a significant part of the lecture material was not in the text meant that students needed to engage in a lot of notetaking. Of the students observed, 80-90% did cued notetaking, and 50-65% of students did uncued notetaking.

   For one of the two classes observed, writing was also important because the exam format was essay writing. The essay exams entailed relatively complex cognitive demands:

A. Students had to know the content in depth. As one student put it, "He wants us to know almost everything about the events, and not just the big events, but everything that happened before, after, in between. He wants us to know everything." The professor agreed, "In order to get an A grade a student should have a good deal of information...indicate that you know what it means, that is, in terms of the topics that are in the course.... I don't grade grammar."

B. Students had to synthesize material from multiple sources (the course text and their own notes). According to one student, "In the lecture he gives you the big picture and a lot of details, but still you need to read..." Or, as the professor says, "They have to bring together information from two different places and somehow say what it means."

C. Students had to process material using the cognitive operations of synthesis and analysis. A student's comment indicates that, "He wants us to integrate it, write it down, think about it, and analyze it. Everything that happens has to do with everything else. This is a fairly accurate description of what the professor requires. As he sees it, "My idea is that all of this kind of knowledge that you learn in a history course is a combination of specific facts and topics of discussion within which the facts speak and that one is no good without the other. The students come with these defined differently in their minds, 'You want facts or the overall picture?' I answer this: 'Both.'"

3. **For students, the greatest problem was not having enough time for assignments.**

Surveys indicated that students struggled most with finding enough time to complete their assignments. This response seemed to be the effect of the amount of reading material assigned. The amount of material was also related to the problem that students ranked as the 2nd most important: exam difficulty. Nearly 2/3 of the students surveyed indicated that there was too much material to remember easily. According to one student, "The amount of material to learn for each test was so much. It was hard to absorb and keep names straight and events straight." Exam difficulty caused by the amount of material to be remembered also interacted with the cognitive complexity already noted for essay exams. As one student said, "When it came to thinking about how integrating this affected that, it was hard. Because I had to come up with my own idea, and I didn't want to think of my own idea. I wanted just to put down what I had learned.... It required a lot of thinking, which isn't bad, but it is just after studying so much of history, you don't want to think about it. You just want to remember it and know it and get it down on paper."

C. HISTORY AT CITY HIGH AND URBAN UNIVERSITY: A COMPARISON

1. One of the primary differences between City High and Urban University was the relationship between the amount of material to be learned and the time allotted for that learning. At City High, students had 180 class hours in which to cover approximately 1000 pages of material. At Urban University, students had 50 class hours to cover nearly 800 pages of material. The result was that City High students had to read (and retain) information from about 23 pages per week; Urban University students had to cover nearly 80 pages per week.

2. At City High students were primarily responsible for learning material for objective tests. At Urban University, students were required to acquire course content and to use it in different ways. As one student said, "Reading in high school is just reading and answering questions, and then all you have to know is the answers to those questions. Reading in college you have to know not just answers to questions, but you have to read everything and make your own judgments. You have to do everything after what you have read; answer a big essay question to writing a paper about it."

3. At City High, language and study skills are much more integrated into the course, with students being required to do significant amounts of writing based on reading. At Urban University, students do little writing (except for essay exams).

4. Students at City High felt that reading assignments in history were the most difficult. Students at Urban University felt that writing in this history class was the most difficult assignment.

5. Instructors at City High use lectures to lead students <u>into</u> text. That is, their lectures are intended to clarify the reading for students. Instructors at Urban University use lectures to lead students <u>away from</u> text. That is, the instructors assume that students have understood the text, and they use lectures to provide students with more abstract, more theoretical, or different/complementary perspectives on text material.

6. Notetaking is an extremely important activity in Urban University classes, since lectures tend to present material not found in the text. At City High notetaking is not as important since lecture material tends to repeat information from the text.

7. The cognitive requirements of (essay) exams at Urban University were analysis, synthesis, and evaluation. At City High, the cognitive requirements of (objective) exams were knowledge, comprehension, and application.

8. The course grade at Urban University was determined principally by performance on quizzes and exams. Half the course grade at City High depended on quiz and exam performance; the other half depended on non-test assignments (reports, homework, etc.).

IV. POLITICAL SCIENCE

A. CITY HIGH POLITICAL BEHAVIOR

This course is a one-semester course taken by 9th graders and totalling approximately 90 class hours. The syllabus is a standardized one for City High Political Behavior classes and includes a list of Quality Core Curriculum Objectives (QCCO) that have been identified for political behavior classes for the entire city public school system. QCCO's include items such as:

"Explain the historic foundation of the American government."
"Analyze the rights of the individual guaranteed in the Constitution of the United States."

So, the QCCO's include both factual information, as well as cognitive skills (explain, analyze).

1. **The primary reading requirement of the course is the course text, and the focus of the text is on both content acquisition and acquisition of study skills.**

   The text was rated on the Flesch readability scale as being at the 9th grade level. The average assignment was 23-25 pages (1 chapter) per week (for a total of 598 pages), although the pace varied depending on content, with the chapter on the Constitution taking three weeks, for example).

   The primary purpose of class lectures was to explain and elaborate on text material. The instructor made frequent references to text, including specific page numbers, in an effort to engage students. Lectures also included a focus on vocabulary acquisition, and frequent student/instructor interaction. The instructor's goals seemed to be to lead students into the text in order to help them access the material.

2. **Writing requirements of the course primarily involved the development of academic study skills and were integrated with the course content through the reading assignments.**

   Students engaged in various writing activities. They were asked to practice a variety of study skills: summarizing, dictionary use, analyzing points of view. They also worked on various library skills, such as using general reference sources and the Reader's Guide to periodicals. Finally, they did worksheets that reinforced text content, and wrote a multi-page essay that required using multiple sources.

   There was very little notetaking observed in the class. Only 8% of the students engaged in cued notetaking; 1% engaged in uncued notetaking.

3. **Students listed their main problem as exams.**

   Students took end of chapter exams, as well as a midterm and a final. All the exams were standardized, with the midterm and final written to key to QCCO's and to

match the Junior Year Matrix Exam (a state-wide competency exam that all students must pass to graduate). The exam format was objective. Chapter exams were typically matching and true/false, and the midterm and final each consisted of 100 multiple choice questions. The cognitive demands of chapter exams were primarily recognition of factual information; the midterm and final required knowledge, comprehension, application, and some analysis.

The number one problem listed by students was the time required to finish exams, with the number two problem being exam difficulty. When students found exams difficult, over half said they had learned the answer but forgotten; over one-fourth said that they didn't know the answer.

The surveys and interviews revealed that students didn't seem to know why they were having trouble in the course, or even if they were having trouble. At this point (they're freshmen), many undoubtedly lack the ability to monitor their cognitive activities (that is, they lack metacognitive skills), and it is this ability that differentiates younger from older or more experienced learners, and good from poor learners. The students interviewed all said that they had no trouble with the course, they understood the reading, and they were doing well. In fact, they're making a big transition themselves--from elementary or junior high to high school. They are not cognitively mature as yet, and much of what is learned will probably not be available to them as entering university freshmen.

B. URBAN UNIVERSITY POLITICAL SCIENCE

This course is a five-hour course, an introduction to American government, totalling approximately 50 class hours. It is a required course for undergraduates in the College of Arts and Sciences.

1. **The primary reading requirement was the course text and the amount of assigned reading was relatively light.**

   In the two observed classes, both texts were approximately 370 pages long (averaging 34 pages per week). One text was rated at 10th grade readability level; the other was measured at the 12th grade level. In one of the two classes, students were also required to read a novel.

   Because lectures tended to elaborate on and explicate the text rather than present new material, not all students felt that they had to read the text. In fact, some did not even buy the book. In addition to lectures that reinforced text material, 40% of class time was devoted to showing videos which were also a reinforcement of text and lecture material. Students, then, had three possible sources of content input available to them.

2. **The writing requirements were relatively light.**

   Because lectures tended to repeat text material, notetaking was important for students who chose to read rather than take lecture notes. Notetaking was difficult, however, during video showings for three reasons:

   A. The lights were turned off;
   B. The actors/announcers talked very quickly (not as lecturers accommodating note takers);
   C. The material was structured to entertain, not to be accessible to note takers, and the organization made it difficult to write coherent notes.

   As a result of these two factors (repetition of text material in lectures and poor notetaking conditions during video showings), only 45% of the students were observed doing cued notetaking, and around 15% did uncued notetaking. Nevertheless, in spite of the fact that notetaking appeared to be relatively unimportant to students, (as indicated by the number of students observed to be doing notetaking), the student surveys showed that notetaking was the most difficult assignment. This may have been the result of few students doing the reading (only 28% of the students did all the reading; 25% did none of the reading), and the resulting burden that was put on notetaking as the sole source of information.

   There were no essay exams given in either class, although one instructor required an assigned essay and a book review.

3. Students overwhelmingly listed exam difficulty as their greatest problem.

The largest number of students (35%) attributed their exam difficulty to not being able to understand the question. (Note that this was the primary source of exam difficulty for only 3.4% of history students). Why did students feel that they didn't know what was being asked? In order to answer this question, we must first look at the characteristics of the political science exams.

A. All the questions were multiple choice questions.

B. The emphasis in the exams was not on the recognition of material, but on critical thinking: analysis, synthesis, and evaluation--the three highest skills on Bloom's taxonomy of educational objectives. (The bottom three are knowledge, comprehension, and application).

C. Students were instructed on the exam to choose the most correct answer.

D. Exams were not returned to the students. One professor went over the exam in class with the students; the other offered to make exams available by appointment in his office.

The reason that students found exam questions difficult to understand is probably due to a combination of two factors. First, students were unclear about the multiple choice format; they expected multiple choice questions to be recognition, but they were analytical instead. As one student noted, "I expected to be able to study my notes and read the chapters in the book and be able to pass the exam. What I read and what I study in my notes seem to be some of the stuff on the exam, but not all. It kind of has to do more with knowing it instead of memorizing it." Second, students were unsure about why one answer was more correct than another. Sometimes they thought it was just a matter of opinion. As one student said, "Some of the questions have two answe and you sometimes have to go by what he says his judgment is on it, and not your own."

Further compounding the students' sense of the level of exam difficulty was the fact that exams were not returned to the students, and so students were not able to learn from their past exams to adjust their study and test-taking strategies. Many just kept making the same mistakes.

C. POLITICAL SCIENCE AT CITY HIGH AND AT URBAN UNIVERSITY: A COMPARISON

Similarities

1. Both courses required similar amounts of reading, although the City High class had nearly twice as much time in which to do it.

2. Neither course required significant amounts of writing.

3. Both courses were taught by similar methods--primarily lecture that reinforced text content, with additional material from videos.

Differences

1. Language skills (primarily reading and writing) and study skills were overtly taught and integrated in the City High class. Neither of these skills was a focus or concern of the Urban University classes. That is, students were assumed to possess these skills and were not initiated int · any of the required language or study skills necessary for the course. As one student noted, "I wish they would have given us tests more like college...It's not the work and the learning that is so bad, it's the tests. They are so different from the high school tests... In high school you read a chapter in the book and she gives a test on it. It is just so much easier. Here they are, like, read chapters 1-10 and we will have a test tomorrow."

2. The primary difference was the difference in the cognitive requirements of the exams at Urban University compared with City High. At City High students were given objective, fact-based exams, requiring knowledge, comprehension, and application. Multiple choice exams were primarily recognition. At Urban University, though, the format was the same (multiple choice) but the cognitive requirements were different: analysis, synthesis, and evaluation.

3. Course grades at Urban University depended mainly on exam performance. At City High course grades depended much less heavily on test performance, and considered students' classroom performance and effort.